



**United States Environmental Protection Agency
Region 9 Laboratory**

**1337 S. 46th Street Building 201
Richmond, CA 94804**

Date: 2/13/2012

Subject: Analytical Testing Results - Project R33911
SDG: 12033A

From: Brenda Bettencourt, Director
EPA Region 9 Laboratory
MTS-2

To: Richard Fetzer
US EPA Region 3, Eastern Response Branch
3HS31

Attached are the results from the analysis of samples from the **Dimock Residential Groundwater** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Dissolved Hydrocarbon Gases by GC



United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone: (510) 412-2300 Fax: (510) 412-2302

Project Manager: Richard Fetzter
Project Number: R33911
Project: Dimock Residential Groundwater

US EPA Region 3, Eastern Response Branch
100 Gypsum Road
Stroudsburg PA, 18360

SDG: 12033A
Reported: 02/13/12 10:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
HW32	1202005-01	Water	02/01/12 10:45	02/02/12 09:40
HW32-P	1202005-02	Water	02/01/12 10:50	02/02/12 09:40
HW33	1202005-03	Water	02/01/12 10:49	02/02/12 09:40
HW33a-P	1202005-04	Water	02/01/12 10:42	02/02/12 09:40
HW33b-P	1202005-05	Water	02/01/12 11:42	02/02/12 09:40
TB12	1202005-06	Water	02/01/12 07:20	02/02/12 09:40
FB07	1202005-07	Water	01/31/12 14:15	02/02/12 09:40
HW26-P	1202005-08	Water	01/31/12 11:37	02/02/12 09:40
HW29	1202005-09	Water	01/31/12 18:18	02/02/12 09:40
HW29z	1202005-10	Water	01/31/12 18:18	02/02/12 09:40
HW35	1202005-11	Water	01/31/12 11:49	02/02/12 09:40
HW52	1202005-12	Water	01/31/12 15:22	02/02/12 09:40
TB10	1202005-13	Water	01/31/12 07:20	02/02/12 09:40
TB11	1202005-14	Water	01/31/12 07:25	02/02/12 09:40
TB13	1202005-15	Water	02/01/12 07:23	02/02/12 09:40
HW26	1202005-16	Water	01/31/12 10:26	02/02/12 09:40

SDG ID 12033A

Dissolved Hydrocarbon Gases: Sample 1202005-11 was initially prepared and analyzed immediately after sample 1202005-10 which has high concentrations of methane. The methane result reported in the draft report for 1202005-11 (30 ug/L) was suspected of being elevated due to carry over or contamination from sample 1202005-10. Sample 1202005-11 was reanalyzed at a later date with a lower result. The result from the reanalysis is presented in this final report.

Peaks were found within the presumed retention time windows for propane and butane for samples 1202005-09 and 1202005-10. Propane and butane are likely present in these samples.

Small amounts of methane were detected in the method blanks, field blanks and trip blanks. Reported methane values less than or equal to 6 ug/L are flagged as estimates due to possible contamination.

Bottles for samples 1202005-01 (HW32) 1202005-02 (HW32-P), and 1202005-15 (TB13) were received at 9 degrees Celsius. This is above the recommended transport and storage temperature of 0 - 6 degrees C. No significant effect on the data is expected.

Work Order(s)

1202005



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202005-01		Water - Sampled: 02/01/12 10:45							
Sample ID: HW32		Dissolved Gases by RSK-175							
Methane	RE1	210		3.2	ug/L	B2B0015	02/03/12	02/06/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			112 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1		104 %	66.4-153%		B2B0015	02/03/12	02/06/12	
Lab ID: 1202005-02		Water - Sampled: 02/01/12 10:50							
Sample ID: HW32-P		Dissolved Gases by RSK-175							
Methane	RE1	310		3.2	ug/L	B2B0015	02/03/12	02/06/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			111 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1		110 %	66.4-153%		B2B0015	02/03/12	02/06/12	
Lab ID: 1202005-03		Water - Sampled: 02/01/12 10:49							
Sample ID: HW33		Dissolved Gases by RSK-175							
Methane		1.3	B1, J	1.2	ug/L	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			109 %	66.4-153%		"	"	"	
Lab ID: 1202005-04		Water - Sampled: 02/01/12 10:42							
Sample ID: HW33a-P		Dissolved Gases by RSK-175							
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			110 %	66.4-153%		"	"	"	
Lab ID: 1202005-05		Water - Sampled: 02/01/12 11:42							
Sample ID: HW33b-P		Dissolved Gases by RSK-175							
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			110 %	66.4-153%		"	"	"	
Lab ID: 1202005-06		Water - Sampled: 02/01/12 07:20							
Sample ID: TB12		Dissolved Gases by RSK-175							
Methane		1.2	B1, C1, J	1.2	ug/L	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325



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Project: Dimock Residential Groundwater

US EPA Region 3, Eastern Response Branch
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Stroudsburg PA, 18360

SDG: 12033A
Reported: 02/13/12 10:52

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202005-06							Water - Sampled: 02/01/12 07:20		
Sample ID: TB12							Dissolved Gases by RSK-175		
Surrogate: Acetylene		110 %		66.4-153%		B2B0008	02/02/12	02/02/12	
Lab ID: 1202005-07							Water - Sampled: 01/31/12 14:15		
Sample ID: FB07							Dissolved Gases by RSK-175		
Methane		1.1	B1, C1, J	1.2	ug/L	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		110 %		66.4-153%		"	"	"	
Lab ID: 1202005-08							Water - Sampled: 01/31/12 11:37		
Sample ID: HW26-P							Dissolved Gases by RSK-175		
Methane	RE1	38,000		480	ug/L	B2B0015	02/03/12	02/06/12	RSK-175/SOP325
Ethane		17		1.2	"	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		106 %		66.4-153%		"	"	"	
Surrogate: Acetylene	RE1	113 %		66.4-153%		B2B0015	02/03/12	02/06/12	
Lab ID: 1202005-09							Water - Sampled: 01/31/12 18:18		
Sample ID: HW29							Dissolved Gases by RSK-175		
Methane	RE1	77,000		970	ug/L	B2B0015	02/03/12	02/06/12	RSK-175/SOP325
Ethane	RE1	4,700		970	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Surrogate: Acetylene		102 %		66.4-153%		"	"	"	
Surrogate: Acetylene	RE1	110 %		66.4-153%		B2B0015	02/03/12	02/06/12	
Lab ID: 1202005-10							Water - Sampled: 01/31/12 18:18		
Sample ID: HW29z							Dissolved Gases by RSK-175		
Methane	RE1	62,000		640	ug/L	B2B0015	02/03/12	02/06/12	RSK-175/SOP325
Ethane	RE1	4,100		640	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Surrogate: Acetylene		102 %		66.4-153%		"	"	"	
Surrogate: Acetylene	RE1	115 %		66.4-153%		B2B0015	02/03/12	02/06/12	
Lab ID: 1202005-11							Water - Sampled: 01/31/12 11:49		
Sample ID: HW35							Dissolved Gases by RSK-175		
Methane		6.6		1.2	ug/L	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		115 %		66.4-153%		"	"	"	
Lab ID: 1202005-12							Water - Sampled: 01/31/12 15:22		
Sample ID: HW52							Dissolved Gases by RSK-175		



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202005-12		Water - Sampled: 01/31/12 15:22							
Sample ID: HW52		Dissolved Gases by RSK-175							
Methane	RE1	19,000		130	ug/L	B2B0015	02/03/12	02/06/12	RSK-175/SOP325
Ethane		14		1.2	"	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			105 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1		111 %	66.4-153%		B2B0015	02/03/12	02/06/12	
Lab ID: 1202005-13		Water - Sampled: 01/31/12 07:20							
Sample ID: TB10		Dissolved Gases by RSK-175							
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			113 %	66.4-153%		"	"	"	
Lab ID: 1202005-14		Water - Sampled: 01/31/12 07:25							
Sample ID: TB11		Dissolved Gases by RSK-175							
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0008	02/02/12	02/03/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			111 %	66.4-153%		"	"	"	
Lab ID: 1202005-15		Water - Sampled: 02/01/12 07:23							
Sample ID: TB13		Dissolved Gases by RSK-175							
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0008	02/02/12	02/03/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			112 %	66.4-153%		"	"	"	
Lab ID: 1202005-16		Water - Sampled: 01/31/12 10:26							
Sample ID: HW26		Dissolved Gases by RSK-175							
Methane	RE1	43,000		480	ug/L	B2B0015	02/03/12	02/06/12	RSK-175/SOP325
Ethane		18		1.2	"	B2B0008	02/02/12	02/02/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			99 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1		114 %	66.4-153%		B2B0015	02/03/12	02/06/12	



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B2B0008 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 02/02/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0008-BLK1)

Methane	0.6	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene 73.7 " 66.5 111 66.4-153

LCS (B2B0008-BS1)

Methane	42.6			1.2 ug/L	44.1		97	70-130		200
Ethane	84.1			1.2 "	83.2		101	77-137		200
Ethene	79.8			1.1 "	78.3		102	78-138		200

Surrogate: Acetylene 77.7 " 72.0 108 66.4-153

Matrix Spike (B2B0008-MS1)

Source: 1202005-11

Methane	56.8			1.2 ug/L	44.1	6.64	114	70-130		20
Ethane	82.8			1.2 "	83.2	ND	100	70-130		20
Ethene	76.5			1.1 "	78.3	ND	98	70-130		20

Surrogate: Acetylene 141 " 139 102 66.4-153

Matrix Spike Dup (B2B0008-MSD1)

Source: 1202005-11

Methane	48			1.2 ug/L	44.1	6.64	94	70-130	17	20
Ethane	78.1			1.2 "	83.2	ND	94	70-130	6	20
Ethene	73			1.1 "	78.3	ND	93	70-130	5	20

Surrogate: Acetylene 142 " 139 103 66.4-153

Batch B2B0015 - RSK175 - Dissolved HC Gases

Prepared: 02/03/12 Analyzed: 02/06/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0015-BLK1)

Methane	0.7	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene 75.7 " 66.5 114 66.4-153

LCS (B2B0015-BS1)

Methane	37.7			1.2 ug/L	44.1		85	70-130		200
Ethane	74.4			1.2 "	83.2		89	77-137		200
Ethene	72			1.1 "	78.3		92	78-138		200

Surrogate: Acetylene 74.4 " 72.0 103 66.4-153

Batch B2B0032 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 02/08/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0032-BLK1)

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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B2B0032 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 02/08/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0032-BLK1)

Methane	0.9	C1, J	1.2	ug/L						
Ethane	ND	U	1.2	"						
Ethene	ND	U	1.1	"						

Surrogate: Acetylene	78.5			"	66.5		118	66.4-153		
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LCS (B2B0032-BS1)

Methane	47.7		1.2	ug/L	44.1		108	70-130		200
Ethane	93.9		1.2	"	83.2		113	77-137		200
Ethene	88		1.1	"	78.3		112	78-138		200

Surrogate: Acetylene	79.2			"	72.0		110	66.4-153		
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Qualifiers and Comments

J The reported result for this analyte should be considered an estimated value.

C1 The reported concentration for this analyte is below the quantitation limit.

B1 The concentration of this analyte found in this sample was less than five times the concentration found in the associated method blank.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.